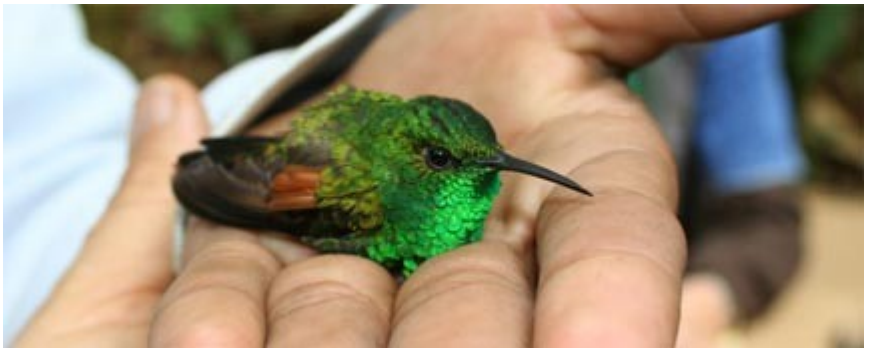
BIRDWATCHING

El Jaguar is a sanctuary for a large number of birds, migratory and residents. In April 2002 a research team from the COCIBOLCA Foundation as part of the National Important Bird Areas Program from BirdLife International, financed by the National Fish and Wildlife Foundation (NFWF) rediscovered in El Jaguar, for the first time in Nicaragua since 1891, the Golden-cheeked Warbler (*Dendroica chrysoparia*). At the same time, the research team detected the presence of the resident Three-wattled Bellbird (*Procnias tricarunculatus*); both species are threatened worldwide.

Among other results the team found 4 new reports for Nicaragua and in just three days made an inventory list with 106 bird species. These results show the importance to conserve El Jaguar as a very important habitat for birds and attracted the attention of both ornithologists and birdwatchers on the importance of Nicaraguan Northern Highlands for birds.

Nowadays El Jaguar Bird's Inventory list has 291 species. Different factors permit to have such quantity of bird's reports in just 100 hectares: 1) Privileged location: El Jaguar is located in the Northern highlands of Nicaragua which are the southernmost distribution range for many species animals and plants. We have at least 13 bird species that you can't see in southern countries. 2) The reserve has a Caribbean slope, therefore many birds from the low Caribbean rainforest, that make altitudinal migrations, can be seen in El Jaguar, but you can also observe birds from the Pacific slope. 3) The forest we protect is a Cloud Forest which trees covered with bromeliads and mosses, and an understory full of ferns and other plants. This forest provides perfect shelter for many birds and other animal life.



EL JAGUAR BIRD RESEARCH

Since 2002 El Jaguar has promoted and sponsored research especially on birds. This has allowed us to know our birds.

MoSi

The MoSI program (Over-wintering survival Monitoring of Migrant Birds) has been developed in the property by the Institute of Bird Population (http://birdpop.org/MoSI/MoSI.htm), Alianza para Las Areas SIlvestres – ALAS (http://www.avesnicaragua.org/) and El Jaguar Preserve. Our property has two of the nine Nicaraguan Mosi Stations, one in the forest and one in the coffee plantations. The MoSi studies are done monthly from November through March, with the objective to collect data about northern migratory birds' survival. The data of resident bird is also taken. The Mosi is the sister program from MAPS (Monitoring Avian Productivity and Survivorship) program in the US and Canada. The captured birds are identified, banded, and body mass, size, age, fat and biometric data is taken.

MoARE

The MoARe program (Monitoring Resident Birds) is an effort to get resident birds' data monthly to fill the gap between MoSIs from April to October. Adding the information taken in both programs provides us all year round data.

Golden-winged Warbler Surveys

Collaborating with ALAS (Nicaragua), ProAves (Colombia) and the Alianza Alas Doradas (Golden-winged Warbler Working Group), El Jaguar research team is carrying out the Golden-winged Warbler Survey in Nicaragua's Northern highlands. The results has been stunning doing 143 reports in March 2009

In 2006 El Jaguar was chosen as an IBA (Important Bird Area) following BirdLife International criteria: http://www.birdlife.org
7 globally threatened bird species SEE IBA BANNER
3 range-restricted species in Mesoamerica
17 biome-restricted species
Every year, from October through April, many migrant neartical birds come to El Jaguar as winter residents or to make a Stopover in the Reserve. Remember that once you are staying at El Jaguar, you can also visit Lake Apanás and the Pine-Oak Forest to do birdwatching tours. (Check the bird lists from these

Survey and 161 in 2009 - 2010 winter season. **Alianza Alas Doradas** research monitoring efforts using standardized sampling protocols across the non-breeding distribution range allow in order of priority: 1) identification and evaluation of the species non-breeding distribution, 2) assessment of habitat use and abundance 3) identification of high-priority sites for conservation.
http://www.bio-nica.info/Biblioteca/InformeGWWA2008.pdf
http://www.alasdoradas.org

Resident Birds' Altitudinal Migration

We collaborate with Dr. Kevin Fraser, New Brunswick University – Canada, in the evaluation of the utility of stable-hydrogen isotope ratios in tropical bird tissues for detecting altitudinal migration events. The results identified two of five species as altitudinal migrants in Nicaragua. This approach may circumvent the current limitations of mark-recapture techniques and enhance our ability to study this poorly characterized behavior.